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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,575

05/07/2007

Shahram Mihan

LU 6152 (US)

8885

34872

7590

07/16/2008

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EXAMINER

LAO, MARIALOUIA

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,575	Applicant(s) MIHAN ET AL.	
	Examiner Louisa Lao	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-26 is/are pending in the application.
- 4a) Of the above claim(s) 11-12, 16, 18, 20, 22, 24, 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 13-15, 17, 19, 21, 23, 25 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/13/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 10, 13-15, 17, 19, 21, 23 and 25) in the reply filed on 6/10/08 is acknowledged. The traversal is on the ground(s) that Applicants believe that "the claims 10-26, all comprise, in part, Applicants' novel and unobvious monocyclopentadienyl complex, of structural formula (I)". This is not found persuasive because Applicants have not explained a special technical feature that meet the unity of invention between monocyclopentadienyl complex, of structural formula (I) and monocyclopentadienyl complex, of structural formula (V).

Further, Applicants' traversal of the single disclosed catalyst system and the reactants for the process is not found persuasive. Applicants are correct in arguing that claims 10, 1-13-15, 17 and 19 are composition claims, however, Applicants may have missed that Group I also includes the new process claims, which are 21, 23 and 25.

2. Claims 11-12, 16-18, 20, 22, 24 and 26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/10/08.

Claim Objections

3. Claim 10 is objected to because of the following informalities: in line 2 of the definition of "A", Applicants may have intended to recite "unsubstituted" and not "unsubstantiated". Appropriate correction is required.

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Applicants are further respectfully requested to ascertain that the specification is free of typographical and grammatical errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 10, 13-15, 17, 19, 21,23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dohring et al. Organometallics 2000, 19, 388-402 in view of Milhan et al. (DE10028432 FD12/20/2001 equivalent to US20040242880, US'880 relied on for English version).

5. Applicants' claims are drawn to a monocyclopentadienyl complex comprising a structural formula (I), $\text{Cp}-(\text{Z-A})_m\text{M}^{\text{A}}$; with substituents as defined therein, where said catalyst is used for olefin polymerization.

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6. Dohring et al. teaches cyclopentadienylchromium(III) complexes, see Table 1, p.390.
7. Applicants' claims differ from Dohring et al. in the presence of the "Z" moiety in the instant claims.
8. The difference is not unobvious, however, in light of the teachings of prior art. One of ordinary skill in the art would have found it obvious to use a bridging group between the "A" and "Cp" in monocyclopentadienyl complex system, as taught for example by US'880. US'880 teaches a monocyclopentadienyl complex system, $(HCp)Y_nM$, where Y may contain an atom of the group 14 or 15 of the Periodic Table and may have the formula $-Z_m-A$, where z is a divalent bridge between A and HCp and A is an unsubstituted, substituted or fused heterocyclic ring system (see claim 1, page 3 [0027], page 4 [0046-0052] and page 6 [0076].
9. An artisan would be motivated to use a bridging group to gain an advantage of "changing the chain length of the linkage between the cyclopentadienyl system and "A", thus influencing the catalyst activity (page 5 [0054]); and reach a reasonable expectation of making other monocyclopentadienyl complex system with other bridging groups.
10. No claims are allowed.

Conclusion

11. The art made of record and not relied upon is considered pertinent to applicant's disclosure. Kipke et al. US20070255033; Applicants' co-pending applications: US20070213205, US20080064838, US20080097053.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louisa Lao whose telephone number is (571)272-9930. The examiner can normally be reached from 8:00am to 8:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

0704-07082008 mll
Louisa Lao
Examiner
TC1600 GAU 1621

/Porfirio Nazario-Gonzalez/
Primary Examiner, Art Unit 1621